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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,042	01/09/2004	Mou-Shiung Lin	MEGP0004USA1	8665
27765 7590 01/04/2008 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER JACKSON JR, JEROME	
			ART UNIT 2815	PAPER NUMBER
			NOTIFICATION DATE 01/04/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com
Patent.admin.uspto.Rcv@naipo.com
mis.ap.uspto@naipo.com.tw

Office Action Summary

Application No.

10/755,042

Applicant(s)

LIN ET AL.

Examiner

Jerome Jackson Jr.

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 163-208 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 163-208 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 163-208 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger with Wagner and Wachtler, all of record.

The previous rejection basically applies. Eichelberger discloses chips or "dies" 102 on a substrate 101 through adhesive 103, polymer 106, pads 107, metallization 108 connected to pads 107 through an opening in polymer 106; and Wagner suggests a silicon substrate for thermal expansion matching and superior heat conductivity (columns 3 and 4); while Wachtler suggests polymer or adhesive on side surfaces as well as the top or bottom surface of the die in a cavity to secure and insulate the die (columns 8 and 9 and figure 22). Note the disclosed polymer of Wachtler is also "adhesive" and adhesives here obviously can be polymers. Claim 163 is obvious structure.

Claim 164 is obvious as Eichelberger shows adhesive 103 on the backside of the die.

Claim 165 is rejected as Wachtler shows first and second regions coplanar in the cavity.

Claim 166 is rejected as Wachtler discloses Polyetherimide in column 9.

Claim 167 is obvious as BCB is well known polymer for isolating wiring as stated in applicant's specification and would have been an obvious substitute for polyimide in Wachtler. There are no unexpected results for BCB or polyimide used in this manner.

Claims 168-170 are obvious as the applied art discloses multiple layers of polymer and wiring.

Claims 171-174 are rejected as the wirings of the applied art inherently comprise resistance, inductance and capacitance, there being no particularly claimed structure or magnitudes of resistance, capacitance, and inductance structurally distinguishing over the applied art.

Claims 175-176 are rejected as the applied art discloses bumps or solder balls as 110 of Eichelberger or 22 of Wachtler; and gold "bumps" as 24 of Wagner, or gold pads (column 9) of Eichelberger, or gold (column 10) of Wachtler.

Claim 177 is rejected as Wachtler shows a second polymer 26 or other overlying polymer layers, and Eichelberger likewise shows multiple layers of polymer for multilayer metalizations.

Claim 178 is rejected as the prior art discloses copper both electroplated or electroless plated. Again note there is no claimed structure distinguishing over the applied art copper regardless of the method used to form the device. See columns 5-9 of Eichelberger or columns 6 and 7 of Wagner.

Claims 179-208 are rejected as above.

Claims 163-208 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eichelberger with Wagner and Wachtler, as above, and further in view of Cole 5,745,984.

In regard to BCB, Cole suggests BCB for its superior properties as an adhesive and in multilayer metalization schemes as Eichelberger. Claims 167, 170, 183, 186 and 204 are obvious structure.

Applicant's arguments filed 10/22/07 have been fully considered but they are not persuasive. Arguments regarding electroplated metal are unconvincing of patentability as, contrary to the arguments on page 12 of the remarks, there are no recitations in the claims of any particular "microstructure" or "grain size" or "crystal orientation" to structurally distinguish the claims over the applied art. See again the previously recited product by process caselaw.

Regarding a "ground bus" note the metallization connecting pads in the prior art can function or be labeled as a "ground bus". See In re Swinehart 169 USPQ 226, Ex parte Minks 169 USPQ 120 and In re Pearson 181 USPQ 641 where it was decided that functional language, statements of intended use, or mere labels do not structurally distinguish claims over anticipating prior art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 571-272-1730. The examiner can normally be reached on M-Th.

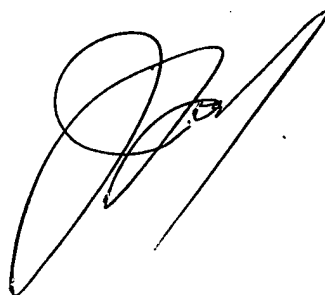
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jj

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by a series of loops and a long, sweeping diagonal stroke.